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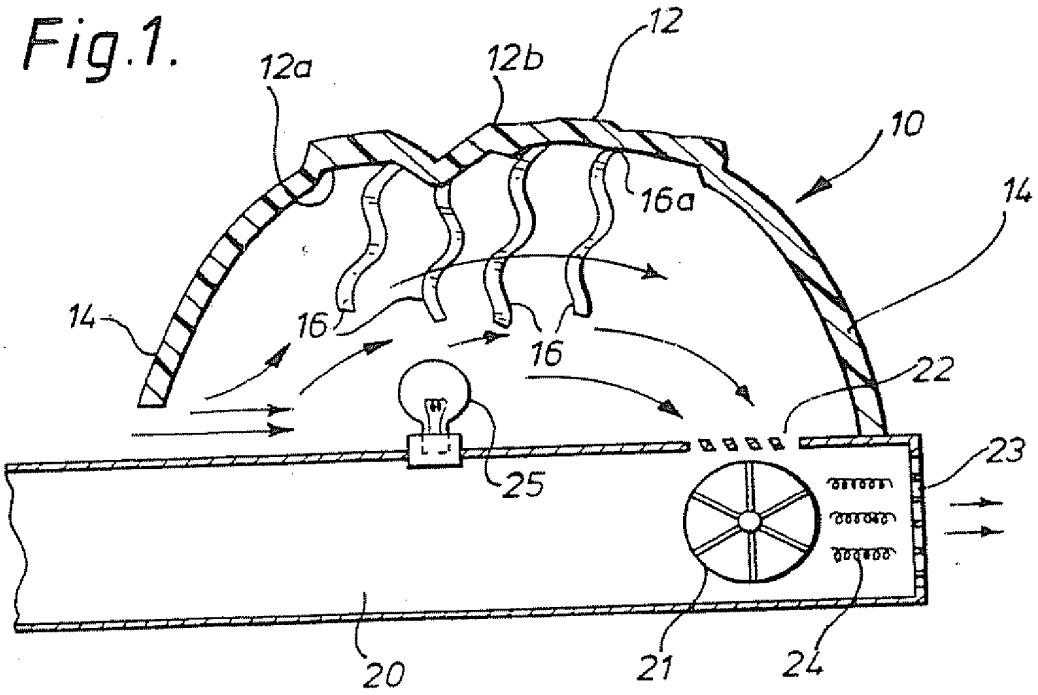
(54) Flicker effect device for solid fuel effect fire

(57) A flicker-effect device suitable for incorporation in a solid-fuel effect fire includes a light source 25 and a cover 10 simulating the solid fuel and including one or more regions which are translucent, the device comprising at least one fire resistant flexible strip member 16 suspended within the cover whereby, in use, air is caused to flow below the cover and displace each strip member 16 to interrupt passage of light emitted from the source 25 and produce a flame flicker effect.

Fig.1.



At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy

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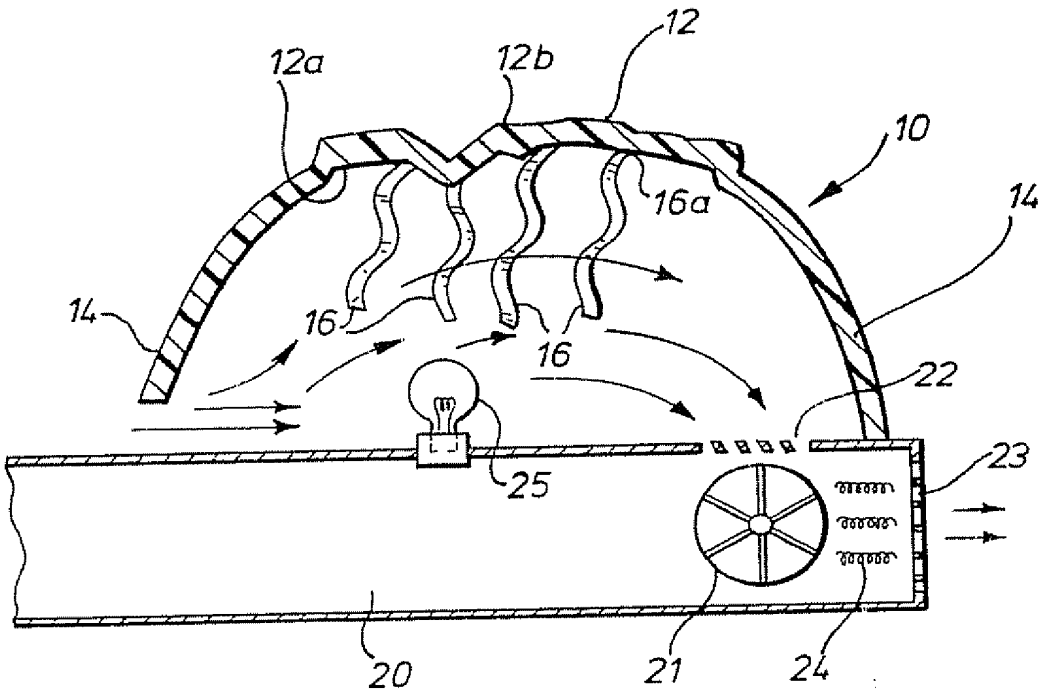

Fig.1.

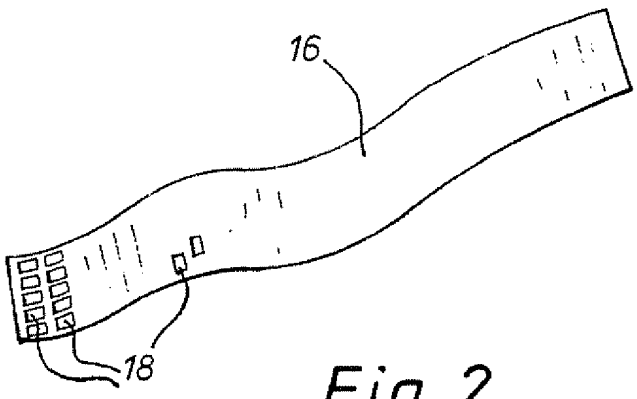

Fig.2.

A FLICKER-EFFECT DEVICE

The invention relates to a flicker-effect device suitable for incorporation in a solid fuel-effect fire, that is an electric fire having artificial non-burning logs, coal or the like in which the effect of flames is produced by light produced from an electric light bulb flickering among the logs or coal and simulating a solid fuel fire. Such flickering is normally obtained by a fan which is rotatably mounted between a heat/light source and the logs or coal simulating the solid fuel fire. In operation the fan is driven by convection currents from the said source and is mounted with the aid of brackets or like mounting structures. The mounting structures must be sufficiently strong to support the fan as it rotates as well as to hold the fan in position above the light source.

It is an object of the present invention to produce an improved flicker-effect device which is of simpler construction and cheaper to produce than the known devices.

According to a first aspect of the invention a flame flicker-effect device for a solid fuel-effect fire includes a light source and a cover simulating the solid fuel and including one or more regions which are translucent, the device comprising at least one fire resistant flexible strip member suspended within the cover whereby, in use, air is caused to flow below the cover and each strip member to interrupt passage of light emitted from

the source and produce a flame flicker-effect.

Conveniently the strip member or members are made from a fabric material, such as glass fibre, and may be perforated. The strip members may be attached to the main portion of the translucent cover by an adhesive or an adhesive tape or a fire resistant filament.

Flicker-effect devices of this type can be produced relatively cheaply when compared with conventional rotary fans. There are further advantages in that the flicker-effect device of the invention does not require bulky mountings such as brackets and bearings to support the device. Instead, each strip member can be secured very simply by means of adhesive or adhesive tape. The material used to make the strip members may be translucent and/or have perforations to prevent cut-off of light from the light source. Moreover, because the strips are lightweight they will move under the effect of a current of air produced by a conventional heat/light source or preferably a stream of inlet air to or exit air from a turbo fan in for example a turbo fan heater.

One embodiment of the invention will now be described by way of example with reference to the accompanying drawings, in which:-

Figure 1 is a transverse section of a translucent body for a fuel-effect fire according to the invention; and,

Figure 2 is an enlargement of one of the strip members of Figure 1.

The cover 10 shown in Figure 1 comprises a moulded body of translucent plastics material and comprising a central portion 12 and side portions 14. The central portion is moulded in the shape of logs and has an outer surface 12b and an inner surface 12a. A plurality of strip members 16 are attached by one end 16a to the inner surface 12a of the central portion 12 by means of adhesive tape (not shown). The strip members are made of a glass fibre material, which in Figure 2 is shown to consist of loosely woven fibres 18 so as to provide a strip of open woven fabric having a length of from 10 to 16 cm. The cover 10 is shown mounted on a conventional turbo fan heater 20 having a fan 21, an air inlet 22, an air outlet 23 and electric heater coils 24. Incoming air is drawn by the turbo fan 21 through the inlet 22 thereby displacing the strips 16 and interrupting light from a light source 25 to cause a flame-flicker effect.

The embodiment described is included for illustration purposes only and is not, therefore, intended to limit the invention. Thus, the strip members 16 need not be formed of woven glass fibre material but could be formed of a perforated fire resistant plastics material or any material which is sufficiently flexible, fireproof and lightweight to move in response to convected heat. Moreover, the strip members need not be secured to the translucent body with adhesive tape but could be releasably

mounted or even formed integrally with the body. Naturally, the actual length of individual strip members 16 will depend on their actual position within the translucent body 10 and the size of the translucent body 10 and also the position of the light source.

The cover may be constructed in the form of a laminate comprising two or more layers of fire resistant materials, e.g. glass fibre, bonded together with a fire resistant resin. In such a construction each strip member may form a part of one of the layers of fire resistant material.

Alternatively, the strips may be attached to a grid which is mounted below the cover in such a position that the strips are suspended above or adjacent to the heat/light source and in the path of the air stream.

The strips may be attached to the grid or cover using a fire resistant material in the form of a filament such as flexible yarn, incandescent string and the like. Such a form of attachment permits swaying and twisting movement of the strips to a high degree thereby producing an increased flicker effect.

CLAIMS:

1. A flame flicker-effect device for a solid fuel-effect fire including a light source and a cover simulating the solid fuel and including one or more regions which are translucent, the device comprising at least one fire resistant flexible strip member suspended within the cover whereby, in use, air is caused to flow below the cover and displace each strip member to interrupt passage of light emitted from the source and produce a flame flicker-effect.

2. A device according to claim 1, wherein each strip member is made from a fabric material, a metallic foil or lamination containing a fabric or metallic foil.

3. A device according to claim 1 or claim 2, wherein each strip member is perforated.

4. A device according to any preceding claim wherein each strip is suspended directly from the cover.

5. A device according to claim 4 wherein each strip is an integral part of the cover.

6. A device according to claim 5 wherein the cover comprises a lamination of two or more layers of fire

resistant materials bonded together with a fire resistant resin and wherein each strip member is part of one of the said layers.

7. A device according to any one of claims 1 to 3 wherein each strip is suspended from a support disposed within the cover and intermediate the cover and the light source.

8. A device according to any preceding claim wherein the flow of air is created by a turbo fan.

9. A device according to claim 8 wherein the flow of air is a stream of inlet air to the turbo fan.

10. A device according to claim 8 wherein the flow of air is a stream of outlet air from the turbo fan.

11. A flicker-effect device for a fuel-effects fire substantially as herein described with reference to the drawings.

12. A translucent cover for a solid fuel-effects fire having attached thereto one or more fire-resistant flexible strip members which are displaceable in response to an air stream caused to flow below the cover.

13. A cover according to claim 12 wherein a plurality of strip members are individually attached to the cover in spaced relationship.

14. A cover according to claim 12 or claim 13 wherein each strip member is made from a fabric material, a metallic foil or a lamination containing a fabric or metallic foil.

15. A cover according to any of claims 12 to 14 wherein each strip member is perforated.

16. A cover according to any of claims 12 to 15, wherein each strip member is attached to the cover by an adhesive.

17. A cover for a fuel-effects fire substantially as herein described with reference to Figure 1.

18. A device according to anyone of claims 1 to 10 or a cover according to any one of claims 12 to 16 wherein each strip is suspended within or attached to the cover by means of a fire resistant filament.

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